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TITLE

ACTIVE SURVEILLANCE OF PRRSV IN BREEDING, NURSERY AND FINISHING FARMS FROM CARCASSES

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CONTENT

Introduction

The use of processing fluids is a sensitive tool to monitorize PRRSV status in a cost-effective way. The use of removed parts of carcasses could be used as an aggregated sample to evaluate the presence of PRRSV. The main objective of this study is to evaluate the concordance of this new PRRSV diagnostic procedure versus oral fluid sampling and serum for active surveillance in swine farms.

Material & Methods

Three PRRSV negative and twenty PRRSV positive farms were included. Samples of dead pigs (in the nursery and finisher) and stillborn pigs (in the breeding herd) were collected daily and placed in a Ziploc bag in the freezer grouping the samples by farrowing batches, week of nursery phase and monthly for finishers, respectively. Samples were homogenized in a laboratory paddle blender (Stomacher®). The fluid was extracted and a PRRSV RT-PCR was carried out according to the manufacturer. All positive samples will be sequenced using Sanger technology for ORF5. The concordance between diagnostic procedures were carried out using kappa analysis.

Results

Four farms have been tested and the rest will be available at the meeting. All the samples coming from PRRSV negative farms were negative by RT-PCR. However, PRRSV was detected in 100% of the samples coming from PRRSV positive farms. The Kappa value was one, showing an excellent concordance between the detection of PRRSV in carcasses of any pig farm versus oral fluids and serum sampling. Finally, it was possible to sequence PRRSV in all positive samples from carcasses.

Discussion & Conclusion

Active surveillance of PRRSV from carcasses in breeding, nursery and finishing farms is a diagnostic procedure that is interchangeable with oral fluid and serum sampling. It allows monitoring PRRSV status in a cost-effective way. Moreover, it is possible to sequence the PRRSV strain for epidemiological molecular studies.